Belle Ayr Cats

CORIN DNA Hierarchical Genealogy Tree

Belleayr.com

CORIN DNA Hierarchical Genealogy Tree
How the Feline CORIN Copper gene is carried genealogically

The CORIN copper gene alters the coat pigmentation, affecting the deposition of the pigmentation in the hair.
When the cat is homozygous for copper, then the cat carries two copies of the gene (cop/cop).

If the cat is heterozygous for copper, they carry one copy of the gene (n/cop) but the gene can affect the original coat color and appear to be CORIN copper. This was the case for a kitten called Belle Ayr Organa BSH ny11 F n/cop. As a kitten she appeared to be cop/cop even her paw pads were light fur, only with time, recent understanding of how CORIN copper gene is carried genetically across the genealogy and DNA testing did we confirm her coat colour.

The intensity and pattern of these colors depends on the other genes involved in formulating the final feline phenotype.

There is a recessive + lightning gene which renders the coat translucent with copper tones.

The gene codes for the CORIN Golden:
Homozygous (cop/cop)
Heterozygous (n/cop)
Golden - non copper (n/n cop)

At Belle Ayr Cats have been able to trace how the CORIN Copper gene is genetically carried and can act as a recessive gene.

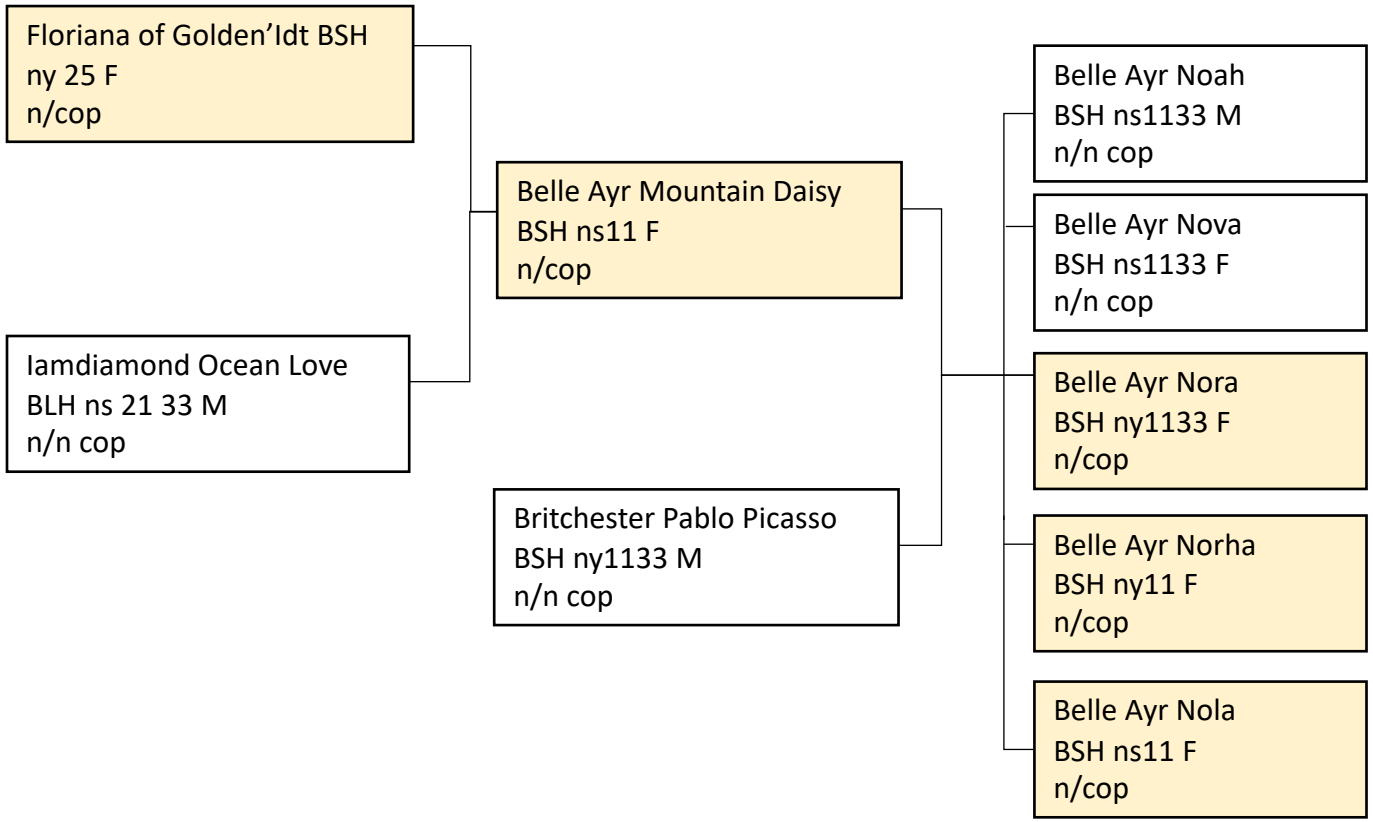
Having DNA tested over 11 litters, 30 kittens and 24 adults.
Here is a sample of our results displayed in a hierarchical genealogy tree.

More information can be found here: https://www.belleayr.com/articles/what-is-the-copper-colour

CORIN DNA Hierarchical Genealogy Tree

How the CORIN Copper gene is carried across generations

Example of Heterozygous (n/cop) Recessive Gene



CORIN DNA Hierarchical Genealogy Tree

How the CORIN Copper gene is carried across generations

Example of Homozygous (cop/cop) Recessive Gene

Floriana of Golden'Idt BSH
ny 25 F
n/cop

Diana's Dream Union BSH
ny 11
n/cop

Belle Ayr Sola rise (aka Flash)
BSH M
Homozygous Cop/cop + lightning gene

Belle Ayr Serenity
BSH ny11 F
n/cop

Apollo Eclat d'Or
BSH ny12 M
cop/cop

Belle Ayr Sylvester
BSH ny25 M
n/n cop

Belle Ayr Onesty
BSH ny12 F
cop/cop

Belle Ayr Olympia
BSH ny12 F
cop/cop

Belle Ayr Oaks
BSH ny12 M
cop/cop

Belle Ayr Orror
BSH by12 M
cop/cop

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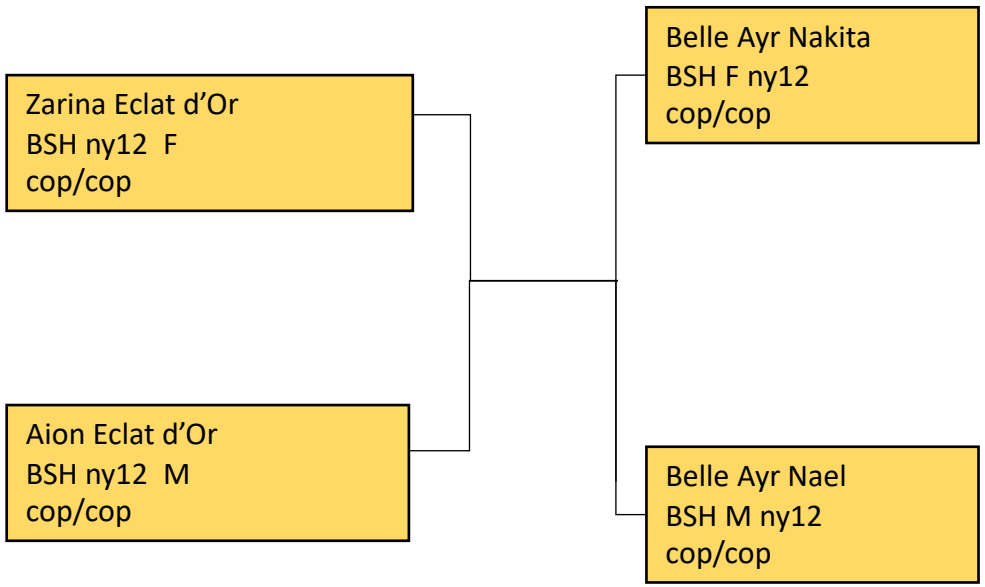


CORIN DNA Hierarchical Genealogy Tree

How the CORIN Copper gene is carried across generations

Example of Heterozygous (n/cop) Recessive Gene

Zarina Eclat d'Or
BSH ny12 F
cop/cop

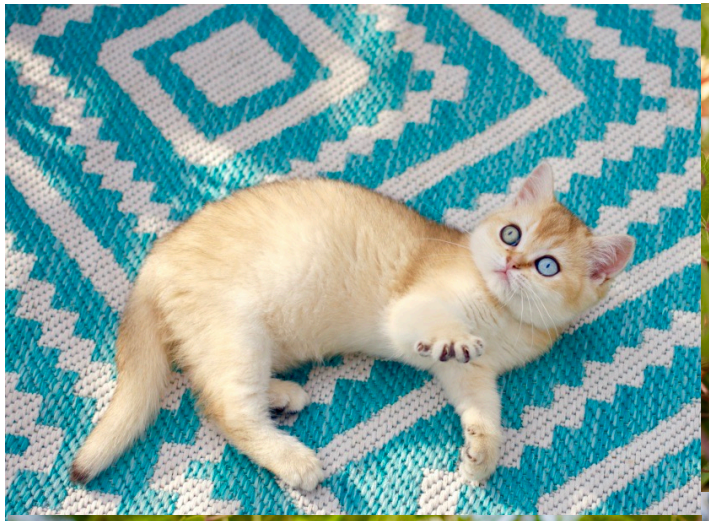
Cotomodda Hubba-Bubba
BSH ny 25
n/n cop

Belle Ayr Organa
BSH ny11 F
n/cop

Belle Ayr Ossus
BSH ny11 F
n/cop

BElle Ayr Onderon
BSH ny11 M
n/cop

Belle Ayr Obi-wan
BSH by12 M
n/cop



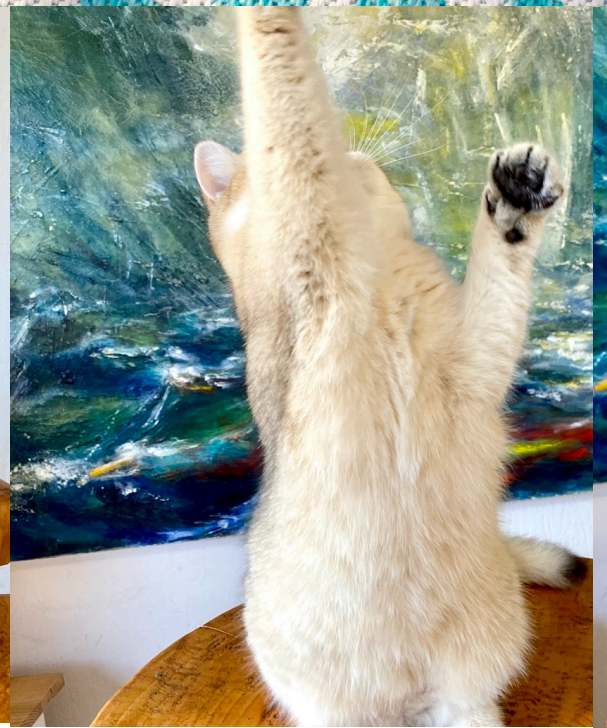
CORIN DNA Hierarchical Genealogy Tree
Belle Ayr Organa BSH ny11 F n/cop

Belle Ayr Organa
BSH ny11 F
n/cop

Zarina Eclat d'Or
BSH ny12 F
cop/cop

Belle Ayr Ossus
BSH ny11 F

Cotomodda Hubba-Bubba
BSH ny 25
n/n cop



a. Serenity

b. Aion

c. Floriana

d. Zarina with her kittens

e. Golden Sky

f. Sola rise
(ask Flash)

g. Copper + Lighting gene

h. Variation of Gold

We would like to express our gratitude to Professor Marie Abitbo of the Université de Lyon. Who conducted the original research in identifying the CORIN:c.2425C>T variant, which represents the wbBSH (British recessive wideband) allele in the domestic cat.

https://onlinelibrary.wiley.com/doi/epdf/10.1111/age.13228

- In a chocolate tabby British cat (a), the blond tone and the agouti phenotype are owing to agouti banded hairs with a discrete lightening of the belly, ivory marks on the upper sides of the chest.

- The copper cats (b–d) were T/T homozygous for the CORIN:C.2425C>T variant and showed tipped hairs.

- The golden ticked cat (c) showed agouti ticked hairs and was heterozygous for the CORIN:C.2425C>T variant

- Note the blond to red tone with marked ivory belly and ivory marks on the upper sides of the paws (e).

- The copper cats with a lightning gene (f), has yet to be genetically identified, note the agouti phenotype expressed by the apricot tone, owing to the agouti banded hairs. The paw also have the apricot tone, note the colour of the paw pads are not black (g).

- Golden Kitten come in a vast range of colours, here are a selection from both British Cat parents. The kitten on the left is Copper + lightning Gene, (it’s next to a silver shaded kitten for comparison).

- More information about the Copper genetics: https://www.belleayr.com/articles/what-is-the-copper-colour